



# NASA Procedural Requirements

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**COMPLIANCE IS MANDATORY**

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## NASA Export Control Program

**Responsible Office: Office of External Relations**

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# Preface

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## P.1 PURPOSE

This NASA Procedural Requirements (NPR) document provides instructions and requirements for the implementation of NASA Policy Directive (NPD) 2190.1 "NASA Export Control Program." Specifically, this NPR provides requirements, instructions, and responsibilities for all NASA employees and NASA support contractors engaged in activities that involve the transfer of commodities, software, or technologies to foreign individuals or organizations. Such transfer activities are regulated by export control laws in order to protect the national security and to further U.S. foreign policy objectives. These are primarily codified in the U.S. Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR) that are administered by the Departments of Commerce and State, respectively.

The NASA Export Control Program is a NASA-wide (Headquarters and Centers) system established to ensure that exports and transfers to foreign parties in the course of approved international activities are consistent with the EAR and ITAR. Most exports can proceed without prior specific written authorization, or "validated license," under various Exceptions, Exemptions, or Special Licensing Procedures. This NPR establishes criteria for fully qualifying for such Exceptions and Exemptions, as well as complying with export control requirements, generally.

The NASA Export Control Program is based on a "corporate" philosophy that says: We want to maximize the benefits of our international efforts while ensuring that we comply with U.S. export control laws and regulations." This is the personal responsibility of each employee. It is a tangible expression of the Agency's statutory mandate and mission in the responsible pursuit of appropriate international activities involving transfers of technologies, software, and commodities. The Export Control Program is the mechanism within the Agency that provides checks and safeguards at key steps in program development and implementation, to help manage international activities. Absent an effective Export Control Program, NASA and its employees risk running afoul of the EAR and ITAR, which may result in criminal, civil, or administrative enforcement actions against NASA, individual employees, and/or private contractors.

## P.2 APPLICABILITY

This NPR is applicable to all NASA Headquarters offices and Centers, including Component Facilities, and to NASA contractors and grantees to the extent required in their contracts or grants.

## P.3 AUTHORITY

NPD 2190.1 "NASA Export Control Program"

## P.4 REFERENCES

- a. NPD 1051.1F, Authority to Enter into Space Act Agreements.
- b. NPR 1050.1, Space Act Agreements.
- c. NPD 1360.2, Initiation and Development of International Cooperation in Space and Aeronautical Programs.
- d. NPD 1371.5, Coordination and Authorization of Foreign Visits to NASA Facilities.
- e. NPR 1371.2A, Processing Requests for Access to NASA Installations or Facilities by Foreign Nationals or U.S. Citizens Who are Representatives of Foreign Entities.
- f. NPD 1600.2A, NASA Security Policy.

- g. NPR 1620.1A, Security Procedural Requirements.
- h. NPD 1620.2, NASA Badging System.
- i. NPD 2110.1, Foreign Access to NASA Technology Transfer Materials.
- j. NPR 2200.2, Guidelines for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information.
- k. NPD/NPR 2210.1A, External Release of NASA Software.
- l. NPD 2220.5, Management of NASA Scientific and Technical Information (STI).
- m. NPD 2800.1, Managing Information Technology.
- n. NPD/NPR 2810.1, Security of Information and Technology.
- o. NPD 2820.1, NASA Software Policies.
- p. NPR 4200.1E, NASA Equipment Management Manual.
- q. NPD 4200.1A, Equipment Management.
- r. NPR 4300.1A, NASA Personal Property Disposal Procedures and Guidelines.
- s. NPR 5800.1E, Grant and Cooperative Agreement Handbook (14 CFR 1260).
- t. NPR 6200.1A, NASA Transportation and General Traffic Management.
- u. NPR 7120.5B, NASA Program and Project Management Processes and Requirements.
- v. NPR 7500.1, NASA Technology Commercialization Process
- w. Public Law 100-235, Computer Security Act of 1987, as amended.
- x. NFS Subpart 1825.70, Foreign Contracts and International Agreements Clearances.
- y. NFS Subpart 1825.1103-70, Export Control.
- z. NFS Subpart 1827.6, Foreign License and Technical Assistance Agreements.
- aa. Title 15 CFR Parts 730-774, Export Administration Regulations.
- bb. Title 22 CFR Parts 120-130, International Traffic in Arms Regulations.
- cc. Title 22 U.S.C. §§ 2778, et seq., Arms Export Control Act, as amended.
- dd. Title 50 U.S.C. §§ 1701 et seq., International Emergency Economic Powers Act, as amended.
- ee. Title 50 U.S.C. app. §§ 2401 et seq., Export Administration Act, as amended.
- ff. Title 50 U.S.C. app. §2170, Exon-Florio Act, as amended.

## **P.5 CANCELLATION**

None.

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**/S/ John D. Schumacher**

**Assistant Administrator for  
External Relations**

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# CHAPTER 1. INTRODUCTION AND DEFINITIONS

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## 1.1 GENERAL

This NPR provides basic procedures and Requirements for fulfilling NASA's obligation to comply with all U.S. export control laws and regulations in its transfers of commodities, software, or technologies to foreign parties (including foreign contractors) in the course of approved international activities. It is the responsibility of every NASA employee to comply with U.S. export control laws and regulations. The NASA Headquarters Export Administrator (HEA), the Assistant Administrator for External Relations, the NASA General Counsel, Enterprise Associate Administrators, Center Directors, Center Chief Counsel, Center Export Administrators (CEA's), Headquarters and Center Export Counsel (HEC/CEC's), NASA International Program/Project Managers, Contracting Officers and Contracting Officers' Technical Representatives (COTR's), and Transportation Officers are the key personnel charged with ensuring NASA's adherence to those laws and regulations.

1.1.1 Questions regarding the execution of responsibilities set forth in this NPR are to be directed to the cognizant NASA CEA or the HEA. Suggestions for improvements in the content of this NPR are welcome and should be made in writing to the attention of the NASA Export Administrator, Office of External Relations, NASA Headquarters, Washington, DC 20546.

## 1.2 DEFINITIONS

1.2.1 "AO" or "Advisory Opinion" is a U.S. Department of State (DOS) term used to reference official DOS correspondence regarding export licensing regulations and policy issues.

1.2.2 "BIS" refers to the Bureau of Industry and Security, a component of the U.S. Department of Commerce (DOC), which administers the Export Administration Regulations (EAR).

1.2.3 "BIS 748P" is the multipurpose application form for a license to export items or classify items subject to the licensing authority of BIS. Export license application forms are electronically submitted to BIS by the NASA Export Administrator at Headquarters.

1.2.4 "CCL" or "Commerce Control List" refers to a list that includes commodities, software, and technology subject to the authority of BIS. The CCL does not include those items exclusively controlled for export by another department or agency of the US Government, e.g., DOS or Department of Energy (DOE). On the CCL, there are 10 general categories of items, each category is subdivided into five descriptive groups, designated by letters A through E.

1.2.5 "CEA" or "Center Export Administrator" is the senior-level official appointed by the Center Director to implement and manage the NASA Export Control Program at each Center.

1.2.6 "CEC" or "Center Export Counsel" is the attorney appointed by the Center Chief Counsel to provide legal guidance to the CEA in NASA export control matters.

1.2.7 "CFIUS" or "Committee on Foreign Investment in the United States" is an inter-agency committee chaired by the Secretary of Treasury that implements the Exon-Florio foreign investment review legislation. CFIUS seeks to serve U.S. investment policy through thorough reviews that protect national security while maintaining the credibility of our open investment policy.

1.2.8 "CIV" is a CCL-based License Exception in the EAR, 15 CFR § 740.5. CIV authorizes exports and reexports controlled to the ultimate destination for national security reasons only, and identified by "CIV - Yes" on the CCL, provided the items are destined to civil end-users for civil end-uses in specified countries (generally, the nations of the former Soviet Union and certain other countries). Use of EAR Exceptions for exports must have the concurrence of the CEA or the HEA.

1.2.9 "Classification" is the process for determining the relevant entry in the CCL for commodities or technologies that fall under the jurisdiction of the EAR. Classification takes place after the jurisdiction of the item has been determined. Items under the jurisdiction of the EAR can be found on the CCL and items under the jurisdiction of the DOS can be found on the U.S. Munitions List (USML). Individuals are responsible for correctly classifying items. However, NASA can request DOC assistance in classifying an item on the CCL. NASA classification requests must be coordinated with, and submitted by, the NASA Headquarters Export Administrator (HEA).

1.2.10 "CJ" or "Commodity Jurisdiction" refers to the DOS authority to determine if an article or service is under the jurisdiction of the Department of State. A CJ may also be used for consideration of a redesignation of an article or service currently covered by the USML. NASA CJ requests must be coordinated with, and submitted by, the HEA.

1.2.11 "Controls" refers to possible reasons for export prohibitions or restrictions on a commodity, software, or technology. In the context of the EAR, reasons for export control include national security, foreign policy, antiterrorism, crime control, regional stability, international sanctions, and nonproliferation.

1.2.12 "Consignee" is a person, organization, or entity that is a participant or recipient of an export.

1.2.13 "Consignor" is a person, organization, or entity that provides or effects an export.

1.2.14 "DAA" or "NASA Scientific and Technical Document Availability Authorization" refers to NASA Form 1676, used for all NASA-generated or -funded scientific and technical information that is to be released outside NASA. See NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information.

1.2.15 "DCS" or "Destination Control Statement" is a statement made by the exporter or consignor that must be entered on the invoice, and bill of lading, air waybill, or other export control document that accompanies the shipment to its ultimate consignee or end-user abroad. In the absence of other prescriptions (see Section 1.2.40), and at a minimum, it should read: *"These [item description] were exported from the United States in accordance with the [Export Administration Regulations][International Traffic in Arms Regulations]. Diversion contrary to U.S. law is prohibited."* The DCS relates directly to the "Marking Statement" which is discussed in NASA international agreements that provide for exports of items in NASA programs where, in most cases, the international agreement prescribes the content of the DCS.

1.2.16 "Defense Service" means the furnishing of assistance (including training) to foreign persons, whether in the United States or abroad, in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing, or use of defense articles as defined in 22 CFR §120.6. See 22 CFR §120.9 for more description of a defense service.

1.2.17 "DSP-5" is the DOS application form for a license to permanently export unclassified defense articles and related unclassified technical data controlled by the ITAR and subject to the licensing authority of the DOS. Generally, NASA does not seek licenses for exports of technical data or defense services. All NASA export license applications are coordinated with and submitted by the HEA.

1.2.18 "DTC" or "DDTC" refers to the "Directorate of Defense Trade Controls, a component of the DOS, which administers the ITAR.

1.2.19 "Dual-use" is a term used to distinguish the types of items covered by the EAR from those that are covered by the ITAR. Dual-use refers to items that have both a military and commercial application.

1.2.20 "EAR" or "Export Administration Regulations," 15 CFR §§ 730-774, is the set of regulations that control the export of commercial and dual-use items that are designed for commercial use but may have military use as well. The BIS within the DOC has the responsibility for the EAR under the Export Administration Act of 1979, as amended (50 U.S.C. app. §§ 2401, et seq.).

1.2.21 "EAR-99" is an EAR classification used to describe an item (commodity, software, or technology) that is subject to the EAR, but that is not specifically identified on the CCL. EAR-99 indicates the lowest level of control and is eligible for export to most countries (excluding terrorist-supporting and embargoed nations), using the designation NLR. See 15 CFR § 740, Supp.1, Country Group E.

1.2.22 "ECCN" or "Export Control Classification Number" is related to the classification process. On the CCL, there are 10 categories of items, 0 through 9; each category is subdivided into five descriptive groups, designated by letters A through E. The ECCN consists of a set of digits and a letter. The first digit identifies the general category (e.g., 9 - Propulsion Systems, Space Vehicles, and Related Equipment); the letter immediately following identifies in which of the five descriptive groups the item is listed (e.g., A - Equipment, Assemblies, and Components). The following digits



differentiate individual entries by identifying the type of controls associated with the items contained in the entry (e.g., 0 - National Security reasons). The second and/or third digits serve to differentiate between multilateral and unilateral entries. Thus, in ECCN 9A004, the 9 represents "Propulsion Systems, Space Vehicles, and Related Equipment"; the A represents "Systems, Equipment, and Components," and the 00 represent both the reason for control as "National Security" and is subject to multilateral control. The last digit, 4, simply represents the sequential location in the category.

1.2.23 "ENC" is a License Exception under the EAR, 15 CFR § 740.17. ENC authorizes the export of certain encryption items and "information security" test, inspection, and production equipment. All requirements of the ENC Exception must be reviewed and complied with before its use can be authorized. Use of EAR Exceptions for exports must have the concurrence of the CEA or the HEA.

1.2.24 "End User" is the designated final entity and destination of the export indicated on an export license. The foreign government partner signatory to the international agreement or Memorandum of Understanding with NASA is usually the designated end user on a NASA export license application.

1.2.25 "EPT" or "Export Processing Template" is a helpful decision tree or "flow chart" to guide you through the export process. See Appendix A.

1.2.26 "Exception" is an EAR authorization that allows an export or reexport of an otherwise controlled item to proceed without a license, provided that certain specified conditions are met. "Exception" is a BIS term and applies only to items under the jurisdiction of the EAR. Use of Exceptions for exports must have the concurrence of the CEA or the HEA. See 15 CFR, Part 740 for a description of all EAR License Exceptions.

1.2.27 "Exemption" is an ITAR authorization from DTC for exports of unclassified defense articles and defense services without a license under certain specific provisions or limitations. Exemptions can be found in the ITAR. All conditions of an Exemption must be met before use is authorized. Use of Exemptions for exports must have the concurrence of the CEA or the HEA. See 22 CFR Parts 123, 125, and 126 for a description of the most relevant ITAR License Exemptions.

1.2.28 "Export" is the transfer of anything to a "Foreign Person" or foreign destination by any means, anywhere, anytime, or a transfer to a "U.S. Person" representing a "Foreign Person." An export can be any shipment, mail, transfer, or transmission of commodities, technology, or software, regardless whether it occurs in the United States, overseas, or in space:

- transfer to any person by physical, electronic, oral, or visual means, with the knowledge or intent that the items will be shipped, transferred, or transmitted outside of the United States;
- disclosure of technical data to a foreign national by physical, electronic, oral, or visual means within or outside of the United States (disclosure to U.S. nationals representing foreign interests are not exports unless there is knowledge or reason to know that the technical data will be further disclosed to a foreign party);
- transfer to a foreign country, embassy, or affiliate; and
- transfer of control over a satellite or instrument on-orbit.

1.2.29 "Foreign Person," for purposes of export control regulation, is any person who is not a U.S. citizen, permanent resident alien, or "Protected Individual" of the United States (See 22 CFR § 120.16). Note: Under NASA security policies, a "foreign national" is any person who is not a U.S. citizen (See NPR 1620.1).

1.2.30 "Foreign Visit" refers to a visit by a foreign national or foreign entity representative to any NASA facility, including NASA Headquarters, NASA Centers, JPL, or other Component Facilities. NPR 1371.2 describes the procedures and guidelines for review and approval of all visits to NASA facilities by foreign persons.

1.2.31 "GBL" or "Government Bill of Lading" is an accountable, U.S. Government form used to document and facilitate exports of commodities on behalf of the U.S. Government. When a GBL is used to effect an export, the U.S. Government agency authorizing the use of the GBL is the exporter.

1.2.32 "GBS" is a CCL-based License Exception in the EAR, 15 CFR § 740.4. GBS authorizes exports to most free-world countries of certain commodities controlled for national security reasons only. All requirements of the GBS Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must be coordinated with the CEA or the HEA.

1.2.33 "GOV" is a License Exception in the EAR, 15 CFR § 740.11. GOV authorizes exports to and from U.S. Government agencies or personnel. It also permits exports to certain foreign government agencies. All requirements of

the GOV Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

1.2.34 "HEA" is the NASA Headquarters Export Administrator. The HEA is appointed by the Assistant Administrator for External Relations, and is responsible for: (1) ensuring the compliance of all NASA program activities and exports with U.S. export control laws and regulations and this NPR; (2) serving as NASA's Empowered Official for purposes of 22 CFR § 120.25 and 15 CFR § 758.1(a), in certifying and approving all NASA export license applications; (3) serving as the Headquarters point of contact with CEA's; and (4) serving as the Agency's interagency interface for export control matters with the DOS and DOC, and others as appropriate, for all export licensing matters.

1.2.35 "International Agreement" refers to the approved agreement document between NASA and a foreign entity. An International Agreement can take the form of a letter agreement, a Memorandum of Understanding, or similar instruments. Unless otherwise delegated by the Assistant Administrator for External Relations, international agreements are signed by authorized officials in the Office of External Relations at NASA Headquarters. See NPD/NPR 1050.1.

1.2.36 "ITAR" or "International Traffic in Arms Regulations" is the set of regulations that control the export and temporary import of defense articles and services. The ITAR (22 CFR §§ 120-130) is promulgated under the authority of the Arms Export Control Act (22 USC §§ 2778, et seq.). The authority for these controls has been delegated to the Secretary of State by Executive Order 11958, as amended (42 Fed. Reg. 4311).

1.2.37 "Item" means commodities, software, and/or technology/technical data.

1.2.38 "IVL" is an Individual Validated License, which is an export license issued by the DOC or DOS. The DOS export license has a raised stamp and signature by the licensing officer and the original license must be presented to Department of Homeland Security's Bureau of Immigration and Customs Enforcement (BICE) at the time of export. The DOC export license has no signature and a copy can be presented to BICE at the time of export.

1.2.39 "LVS" is a CCL-based License Exemption in the EAR, 15 CFR § 740.3. LVS authorizes the export in a single shipment of eligible commodities of limited value where identified on the CCL. All requirements of the LVS Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

1.2.40 "Marking" or "marking statement" refers to the export control notice that NASA must place on export documents. i.e., GBL, notification for foreign recipient, inventory, or packing lists) for all exports of controlled commodities or technology. The International Agreement governing the export will have a Technical Data and Goods Clause that indicates the marking statement requirement. It is important that all controlled technical data (including software) include a marking statement prior to transfer to the foreign party. A marking statement is similar to the Destination Control Statement (DCS) required in the EAR and discussed in 1.2.15 above. The typical marking statement for exports effected under international agreements would read, "*This (item description) is subject to the export control laws and regulations of the United States of America and is being exported from the United States to (name of foreign recipient) in accordance with (cite international agreement or contract) and U.S. export laws and regulations and are to be used by (name of authorized foreign recipients) only for the purposes of fulfilling their responsibilities under (cite international agreement or contract) and shall not be retransferred to any other entity without the prior written permission of NASA.*"

1.2.41 "NLR" or "no license required" is an EAR term and is entered on the Shipper's Export Declaration (SED), certifying that no license is required to export the item. NLR is determined in the export classification process.

1.2.42 "Publicly Available" or "public domain" means information (including software) that is not subject to export control due to its unrestricted availability as follows: in open literature; available at any library to which the public has access; open seminar; fundamental basic and applied research where the resulting information is ordinarily published and shared broadly within the scientific community; educational information taught in catalog courses, including general scientific, mathematical or engineering principles commonly taught in academic institutions; information contained in published patents or published patent applications; or basic marketing information on function or purpose or general system descriptions. It does not include research which is restricted for proprietary reasons, or which is subject to specific U.S. Government access and dissemination controls. Additionally, information or software which is proprietary to any party is not publicly available. "Public Domain" is a term similar to publicly available. The ITAR defines public domain in 22 CFR § 120.11. The EAR defines publicly available in 15 CFR Part 732.

1.2.43 "Recordkeeping" refers to the requirements for the maintenance of original records pertaining to export transactions for inspection by U.S. Government regulatory departments and agencies upon request. Recordkeeping requirements for the EAR are found at 15 CFR Part 762 and for the ITAR at 22 CFR Part 130.14. Generally, export



records are to be kept for all exports 5 years beyond the expiration date of an export license or 5 years beyond use of a License Exception or Exemption.

1.2.44 "Red Flag" means any abnormal circumstance in a transaction that indicates that the export/transfer may be destined for an inappropriate end use, end user, or destination. Examples may include requests for items that are inconsistent with the needs of the partner/project, requests for equipment configurations that are incompatible with the stated destination (e.g., 120 volts in a country with 220 volts), or other apparent irregularities. Always inquire and seek additional information if red flags are indicated. Refer to the EAR 15 CFR Part 732, Supplement 3.

1.2.45 "RPL" is a License Exception in the EAR, 15 CFR § 740.10. RPL authorizes exports associated with one-for-one replacement of parts or servicing and replacement of equipment. All requirements of the RPL Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

1.2.46 "SED" or "Shipper's Export Declaration," is a joint Bureau of the Census/International Trade Administration document used for compiling the official U.S. export statistics and administering the requirements of the Export Administration Act as provided for in the Foreign Trade Statistics Regulations (15 CFR Part 30) and the EAR (15 CFR Parts 768-799). The SED is filed by the exporter with the Bureau of Immigration and Customs Enforcement at the port of exit from the United States.

1.2.47 "STI" refers to Scientific and Technical Information, which consists of the collected set of facts, analyses, and conclusions resulting from scientific, technical, and related engineering research and development efforts, both basic and applied. Information published in policy documents, such as NASA directives and NASA Technical, Engineering, or Safety Standards, or information published as a result of mishap investigations, are not considered STI. See NPR 2200.2A for further information.

1.2.48 "Technical Assistance" refers to Defense Service. See 1.2.16. A Technical Assistance Agreement is an ITAR licensing document required for the performance of a defense service or the disclosure of technical data.

1.2.49 "Technical Data" and "Technology": "Technical Data" is an ITAR term, defined in the ITAR at 22 CFR § 120.10. It is defined as information required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of a defense article identified on the U.S. Munitions List (USML). "Technology" is an EAR term, defined in the EAR at 15 CFR Part 772. It is defined as specific information necessary for the development, production, or use of a product. The information takes the form of technical data or technical assistance. Controlled technology is further described in the General Technology Note (15 CFR Part 774, Supp. 2). As with "Technical Data", controlled "Technology" does not include information which is "publicly available." See 1.2.42 of this NPR. For the purposes of this NPR, the terms "Technical Data" and "Technology" have the same meaning.

1.2.50 "TMP" is a License Exception in the EAR, 15 CFR § 740.9. TMP authorizes various temporary exports; exports of items temporarily in the United States; and exports of beta test software. All requirements of the TMP Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

1.2.51 "TSR" is a CCL-based License Exception in the EAR, 15 CFR § 740.6. TSR permits exports of technology and software controlled for national security reasons only where identified on the CCL, provided the software or technology is destined to a free-world country. (See Country Group B, Supplement No. 1 to 15 CFR Part 740.) A written assurance is normally required from the consignee before exporting under TSR. All requirements of the TSR Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

1.2.52 "TSU" is a License Exception in the EAR, 15 CFR § 740.13. TSU authorizes exports of operation technology and software; software updates (bug fixes); "mass market" software subject to the General Software Note (15 CFR Part 774, Supp. 2); and encryption source code (and corresponding object code) that would be considered publicly available under 15 CFR § 734.3(b)(3). All requirements of the TSU Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

1.2.53 "TTCP" or Technology Transfer Control Plan defines what technologies or technical data in a NASA program or project requires protection and what foreign access is permissible. It also assigns ECP requirements and responsibilities for programs or projects with foreign national participation. NASA international program activities should have a TTCP to follow when they involve international partners/foreign parties. See Section 3.5 of this NPR, *infra*.

1.2.54 "USML" is the United States Munitions List that identifies and enumerates classes of defense articles and defense services subject to the jurisdiction of the ITAR. The USML is found in the ITAR at 22 CFR, Part 121.

1.2.55 "Voluntary Disclosure" is self-disclosure of possible violations of export provisions by persons, firms, or organizations engaged in international transactions. Disclosures of export violations are required to be filed under the ITAR, and are strongly encouraged under the EAR. The HEA will file any such voluntary disclosures concerning possible NASA export control violations with the appropriate agency. All suspected criminal violations in the NASA ECP are to be reported immediately to the HEA, who will consult with the Office of the Inspector General and appropriate regulatory and enforcement agencies. NASA support contractors implementing NASA programs should report potential voluntary disclosure matters to the HEA in addition to taking other actions required under the EAR or ITAR.

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## CHAPTER 2. GENERAL EXPORT CONTROL RESPONSIBILITIES FOR NASA PERSONNEL

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### 2.1 GENERAL

No export or transfers of export-controlled items should be made to any foreign entity under any NASA program unless the exporter is confident that such exports or transfers are in conformity with approved contracts or international agreements and U.S. export control laws and regulations, as delineated in the EAR and ITAR. Further, NASA exports to foreign entities are only conducted in furtherance of NASA international agreements or contracts. Consultation with the NASA HEA, appropriate CEA, or counsel is recommended whenever there is doubt as to whether a proposed export or transfer is consistent with this general principle.

### 2.2 NASA HEADQUARTERS EXPORT CONTROL OFFICIALS

Summarized herein are the authorities and responsibilities of NASA Headquarters officials in NASA's Export Control Program. NASA export control and international technology transfer policy is formulated by the Headquarters Office of External Relations and the program is administered by Headquarters through its network of CEA's.

#### 2.2.1 NASA HEADQUARTERS EXPORT ADMINISTRATOR (HEA)

The HEA is appointed by the Assistant Administrator for External Relations and is responsible for assessing and ensuring compliance of all NASA program activities and exports with U.S. export control laws and regulations. The HEA is also NASA's policy and licensing liaison with the U.S. Government's export control community. Specific HEA functions are delineated in sections 2.2.1.1 through 2.2.1.11.

2.2.1.1 Maintain a working knowledge of current EAR and ITAR provisions and requirements applicable to NASA programs.

2.2.1.2 Approve and maintain necessary NASA licensing documents regarding specific exports pursuant to NASA programs that are subject to the EAR and ITAR. All Commodity Jurisdiction (CJ) requests, Advisory Opinions (AO), Voluntary Disclosures, General Correspondence (GC), export and reexport license applications, and classification requests are coordinated and submitted through the HEA.

2.2.1.3 Serve as the NASA Headquarters point-of-contact for the DOC's Bureau of Industry and Security (BIS), the DOS's Directorate of Defense Trade Controls (DTC), and the DOD's Defense Trade and Security Administration (DTSA) and Defense Threat Reduction Agency (DTRA), and other appropriate Agencies for all international technology transfer/export control issues.

2.2.1.4 Manage NASA's annual ECP internal audits, including providing annual audit guidance to Centers, receiving, and reviewing audit reports. See Chapter 7: NASA Export Control Program Auditing.

2.2.1.5 Serve as NASA Headquarters point-of-contact for NASA Headquarters Program Executives, and the NASA CEA's. Coordinate with appropriate NASA officials on export control matters affecting NASA programs. Where the HEA, in consultation with these officials, determines that a proposed export or transfer would not be in conformity with the EAR or ITAR, he or she shall have the authority to suspend such activity pending resolution with the concerned offices or agencies.

2.2.1.6 Attend, at least annually, export control-related training and coordinate the annual NASA Export Control and Foreign National Management Conference. Provide additional periodic training to NASA Headquarters and Center officials, as requested.

2.2.1.7 Develop, in consultation with appropriate NASA offices and officials, the NASA position on missile

technology proliferation issues and participate in interagency organizations and meetings concerning missile technology transfers and proliferation as the NASA representative.

2.2.1.8 The HEA will also manage export control input to the NASA Foreign National Management System for access to NASA facilities by foreign nationals, in accordance with NPR 1371.2.

2.2.1.9 Obtain the participation of appropriate NASA offices and officials in training and in interagency reviews and assessments conducted by and with the Departments of State, Commerce, Defense, Treasury, and other appropriate agencies concerning technology transfers, export controls, missile technology proliferation, or other related matters affecting NASA programs.

2.2.1.10 Assemble and provide quarterly reports to DTC regarding NASA use of ITAR License Exemptions, in furtherance of the principles of 22 CFR §§ 123.22, 123.26, 125.6, and 126.4(d).

2.2.1.11 Develop and issue export compliance policies and regulation interpretations for NASA to CEAs.

2.2.1.12 Serve as the CEA for the NASA Management Office (NMO) at the Jet Propulsion Laboratory (JPL) in the absence of a formally appointed CEA at the NMO, and otherwise, assist the NMO in administering the NASA/Caltech contract in the area of export control.

## 2.2.2 HEADQUARTERS ASSOCIATE AND ASSISTANT ADMINISTRATORS

The Headquarters Associate and Assistant Administrators are responsible for ensuring that programs and projects within their organizations comply with all U.S. export control laws and regulations and the NASA ECP.

## 2.2.3 HEADQUARTERS EXPORT COUNSEL (HEC)

The HEC is appointed by the General Counsel and is responsible for providing legal guidance to the HEA in NASA export control matters under, inter alia, the EAR and the ITAR. Specific functions are delineated in sections 2.2.3.1 through 2.2.3.3.

2.2.3.1 Assist the HEA in reviewing specific exports and transfers under NASA programs, as appropriate.

2.2.3.2 Serve as the NASA Headquarters point-of-contact for Center Export Counsel on legal matters.

2.2.3.3 Keep abreast of statutory and regulatory developments in the U.S. export control system.

## 2.2.4 HEADQUARTERS PROGRAM AND PROJECT MANAGERS

Consistent with the requirements of NPR 7120.5, regarding Program and Project Management Processes and Requirements, all NASA Headquarters Program/Project Managers shall include "export control compliance planning and export control milestones" in their Program/Project plans with foreign party involvement to ensure that export control matters are considered and resolved in advance of prospective shipping or transfer dates. In addition, all NASA Headquarters Program/Project Managers shall, in consultation with the HEA, ensure that international activities under their direction include the following responsibilities set forth in sections 2.2.4.1 through 2.2.4.7.

2.2.4.1 Appropriate safeguards for commodities, technologies, and software exported or transferred pursuant to international agreements or contracts. All controlled technical data or commodities should be marked or identified in accordance with the Transfer of Goods and Technical Data Clause of the relevant international agreement (See NPR 1050.1, Section 3.5.10.3) or in accordance with the Transfer of Goods and Technical Data Clause of the relevant contract. When necessary and appropriate (and with the concurrence of the CEA or HEA), nondisclosure agreements may be used when foreign nationals are provided controlled technical data or commodities outside the scope of an international agreement or contract.

2.2.4.2 Provision of necessary technical information to the HEA to permit a sound determination as to the need for validated export licenses or other documentation in specific activities, and for the completion of such documentation, where necessary.

2.2.4.3 Where an international agreement governs a program or project whose activities involve exports or transfers to foreign entities, clear provision for such exports or transfers in the terms and conditions of the governing international agreement.

2.2.4.4 Adequate lead time for the submission, processing, and receipt of validated export licenses, where necessary.

2.2.4.5 A technology transfer control plan (TTCP), where appropriate, for programs with international involvement. See Section 3.5 and Appendix B.

2.2.4.6 Support export control training for program/project personnel working with foreign nationals and directing the work of others on the project. All personnel should participate in basic export control awareness training either via NASA's Site for On-Line Learning and Resources (SOLAR) or through on-site briefings.

2.2.4.7 Maintain oversight of NASA-directed contractor export activities, including concurrence on the use of NASA-authorized Exemptions, use of NASA-obtained IVLs, and requiring that copies of all export records (SEDs, GBLs, waybills, invoices) be submitted to NASA.

## 2.2.5 HEADQUARTERS MANAGERS, TRANSPORTATION PROGRAMS

The Manager, NASA Transportation Programs, shall, in consultation with the HEA, ensure that all exports and transfers of commodities, technologies, and software are accompanied by appropriate and accurate export control documentation, including validated licenses, marking statements or other authorizing documents, as needed, as well as SEDs and GBLs, in all appropriate cases. The Manager shall serve as the point-of-contact for the HEA on NASA transportation policies and practices.

## 2.3 CENTER EXPORT CONTROL OFFICIALS

This section summarizes the authorities and responsibilities of NASA Center officials in NASA's Export Control Program. Most transfers and exports subject to the NASA Export Control Program will likely be carried out at the NASA Centers implementing NASA's international activities.

### 2.3.1 CENTER DIRECTORS

Center Directors are responsible for ensuring that all projects under their purview comply with U.S. export control laws and regulations and this NPR. Center Directors appoint senior personnel as CEA's responsible for ensuring compliance of all Center activities with U.S. export control laws and regulations and this NPR. The Center Directors will also designate a qualified individual as an Export Control Auditor (ECA) to annually review the operation of the NASA Export Control Program at that Center, in accordance with NPD 2190.1 and Chapter 7 of this NPG. Appointments of CEA's and ECA's should be reported to the HEA in a timely manner.

### 2.3.2 CENTER EXPORT ADMINISTRATOR (CEA)

Center Directors will appoint a CEA whose responsibilities shall not include duties that could create a conflict of interest with the duties of the CEA. The CEA is responsible for assessing and ensuring compliance of all Center program activities with U.S. export control laws and regulations. Specifically, the CEA will:

2.3.2.1 Serve as the Center resident expert on all matters related to export control and international technology transfer, and serve as the principal Center point-of-contact with the HEA.

2.3.2.2 Maintain a thorough knowledge of current EAR and ITAR provisions and requirements, and all relevant NASA NPD/NPR requirements applicable to Center programs and activities, and assist in developing Center policy and procedures as appropriate.

2.3.2.3 Ensure the completion and maintenance (recordkeeping) of necessary licensing and/or License Exemption or Exception documents regarding specific transfers, pursuant to Center programs which involve exports or transfers subject to the EAR or ITAR. For exports of defense articles under ITAR License Exemptions, provide copies of all correspondence required by 22 CFR §§ 123.22(c), 123.22(d), 123.26, 125.6, or 126.4(d), as appropriate, to the HEA within 30 days of export.

2.3.2.4 Support and participate in the Center process for approving foreign visitors and hires, providing advice and guidance to the Center International Visit Coordinator and to program and project personnel who serve as sponsors for such visitors and hires, and providing assistance in the development of appropriate Technology Transfer Control Plans.

2.3.2.5 Assist program and project personnel in determining the appropriate export controls for publishing and disseminating scientific and technical information under the policy set forth in NPD 2220.5E, "Management of NASA Scientific and Technical Information (STI)" and NPR 2200.2A "Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information. CEA's or their designated representative are required to sign Block VIII, "Export Control Review/Confirmation," on NASA Form 1676, NASA Scientific and Technical Document Availability Authorization (DAA).

2.3.2.6 Assist Center Contracting Officers and Contracting Officer Technical Representatives in procurement-related matters involving export control; e.g., providing guidance on entering into contracts with foreign entities, responding to



contractor questions and requests, drafting of ITAR Exemption authorizations for use by contractors, and drafting of appropriate clauses in NASA solicitations and contracts.

2.3.2.7 Assist the Center Chief Information Officer (CIO) in effecting NASA and local policy on placing information on NASA Web sites.

2.3.2.8 Assist the Center Software Release Authority in making determinations as to export control restrictions, per NPJ 2210.1 and NPR 2210.1.

2.3.2.9 Coordinate with Center Export Counsel, Transportation Officers, and Program/Project Managers, as appropriate, on export control matters affecting Center programs and activities. Advise Center Transportation Officers on questions related to international shipments (including imports of foreign-origin commodities). Where the CEA, in consultation with these officials, determines that a proposed export or transfer would not be in conformity with NASA policy, the EAR or the ITAR, the CEA shall have the authority to suspend such activity pending resolution with the concerned offices or agencies.

2.3.2.10 Attend the annual NASA Export Control Program Conference and at least one other export control training session annually, and will establish an annual Center training plan for responsible Center personnel and arrange for, or provide, training.

2.3.2.11 Review and consult with the HEA on all Center commodity jurisdiction, classification, and licensing requests for Center projects. After local approval, route those requests to the HEA for formal transmittal to, and processing by, BIS or DTC.

2.3.2.12 Serve as the interface with the HEA for review and comment on contractor requested export license applications related to NASA/Center programs/projects. The purpose of a review is to:

1. Determine if the industry applicant is accurately representing the NASA program and NASA involvement.
2. Determine if the work is being done under a NASA international agreement or with an industrial contractor of the NASA foreign partner.
3. Determine if an Exemption or Exception applies for exports in accordance with an international agreement.
4. Verify that NASA contract direction to industry is within the scope of the license activities.
5. Determine any feedback or reporting requirements the program desires to add to the license conditions.

2.3.2.13 Serve as the interface with the HEA for review and comment on Committee on Foreign Investment in the United States (CFIUS) cases related to Center programs or NASA contractors.

2.3.2.14 Serve as the Center export control point-of-contact for GAO and IG audits related to export control matters.

2.3.2.15 Periodically disseminate export control information and guidance to appropriate Center personnel.

2.3.2.16 Review and ensure Center followup and closeout on recommendations from the annual NASA Export Control Program audit, and as appropriate, on GAO and IG audits related to export control.

2.3.2.17 Establish contacts with Center contractors involved in Center programs with international content to share information and to work issues related to licenses and/or granting or use of NASA-authorized ITAR Exemptions.

2.3.2.18 As applicable, assist the International Space Station (ISS) program in performing EAR-required audits and reviews of NASA contractors authorized to use the BIS-approved NASA International Cooperative Licence (ICL).

2.3.2.19 Maintain, electronically or in hard-copy, a reference library of relevant policies, regulations, and, to the maximum extent practicable, the international agreements governing the programs and projects for which exports and transfers are required.

### 2.3.3 CENTER EXPORT COUNSEL

The Center Export Counsel (CEC) is appointed by the Center Chief Counsel and is responsible for providing legal guidance to the CEA in NASA export control matters under, inter alia, the EAR and the ITAR. Specific responsibilities are:

2.3.3.1 Assist the CEA in reviewing specific exports and transfers under NASA programs.

2.3.3.2 Keep abreast of statutory and regulatory developments in the U.S. export control system.



2.3.3.3 Guide the CEA in appropriate interpretation and implementation of export control laws and regulations. Consult with HEC to ensure Agencywide consistency of interpretation.

#### 2.3.4 CENTER PROGRAM AND PROJECT MANAGERS

Consistent with the requirements of NPR 7120.5, regarding Program and Project Management Processes and Requirements, all NASA Program and Project Managers shall include "export control milestones" in their Program and Project plans with foreign party involvement and other activities as appropriate, to ensure that export control matters are considered and resolved in advance of prospective shipping or transfer dates. In addition, all NASA Center Program and Project Managers shall, in consultation with the appropriate CEA, ensure that international activities under their direction include the following responsibilities:

2.3.4.1 Provide appropriate safeguards for commodities, technologies, and software exported or transferred pursuant to international agreements or contracts. All controlled technical data or commodities shall be marked or identified in accordance with the Transfer of Goods and Technical Data Clause of the relevant international agreement (See NPR 1050.1, Section 3.5.10.3) or in accordance with the Transfer of Technical Data Clause (e.g., NFS 1852-227-87) of the contract. When necessary and appropriate (and with the concurrence of the CEA or HEA), nondisclosure agreements may be used when foreign nationals are provided controlled technical data or commodities outside the scope of an international agreement or contract.

2.3.4.2 Provide necessary technical information to the CEA to permit a sound determination as to the need for validated export licenses or other documentation in specific activities and for the completion of such documentation, where necessary.

2.3.4.3 Provide adequate lead time for the submission, processing, and receipt of validated export licenses, where necessary.

2.3.4.4 Maintain oversight of NASA-directed contractor export activities, including concurrence on the use of NASA-authorized Exemptions, use of NASA-obtained IVL's, and require that copies of all export records (SED's, GBL's, waybills, invoices) be submitted to NASA. See Section 3.7 Reporting.

2.3.4.5 Program and project managers shall assure that NASA only transfers those technical data (including software) and hardware necessary to fulfill NASA responsibilities under international agreements and contracts. If foreign contracts are anticipated, program and project managers shall ensure that there is appropriate Headquarters review, in accordance with NFS 1825.7002, and that such contracts are prepared with appropriate export control provisions. Contracts with U. S. industry that support an international program or project must also include appropriate provisions related to export control requirements.

2.3.4.6 Support export control training for program and project personnel that are working with foreign nationals and directing the work of others on the project. All personnel shall participate in basic export control awareness training either via SOLAR or through on-site briefings.

2.3.4.7 Assist in the timely review of industry export licenses related to NASA programs and projects. Verify program description and characterization of NASA and contractor involvement.

2.3.4.8 Include an appropriate technology transfer control plan (TTCP) for programs with international involvement. See Section 3.5 of this NPR for more information about TTCP's.

#### 2.3.5 CENTER TRANSPORTATION OFFICERS

NASA Transportation Officers at each Center shall, in consultation with the CEA, ensure that all exports and transfers of commodities, technologies, and software under Center programs are accompanied by appropriate and accurate export control documentation, including validated export licenses, marking statements, GBLs, or other authorizing documents, as needed, as well as SED's in all appropriate cases. Exports and transfers required by Headquarters Program or Project Managers will be handled through the Goddard Space Flight Center (GSFC) Transportation Officer. The GSFC Transportation Officer shall consult with the GSFC/CEA and the HEA, as appropriate, for such Headquarters exports and transfers.

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## CHAPTER 3. NASA EXPORT CONTROL PROCESS

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### 3.1 GENERAL

NASA, as a U.S. Government Agency on the leading edge of technological development and international cooperation in space, aeronautics, and a variety of scientific endeavors, must be a responsible exporter. The most significant step in any export activity is to determine if the export is necessary and appropriate from a program standpoint, and in accordance with NASA international policy and with the approved international agreement or international contract. The international agreement's "Roles and Responsibilities" and "Technical Data and Goods" clauses provide important guidance on the scope of exports and transfers that are consistent with the relevant program.

In general, NASA is not responsible for contractors' export compliance in the execution of contracted work (see NFS 1825.1103-70 and 1852.225-70). The exception is an instance in which NASA directs or authorizes a contractor to effect exports using a NASA-obtained IVL or GBL.

### 3.2 COMMODITY JURISDICTION AND CLASSIFICATION

Once it has been determined that a planned transfer of commodities, technology, or software to a foreign entity is necessary and consistent with NASA policy and the approved international agreement or contract, the next step is to establish if the item is properly listed on the United States Munitions List (USML) or the Commerce Control List (CCL). The USML enumerates the classes of defense articles subject to the licensing authority of DTC. The CCL identifies items subject to the licensing authority of BIS. NASA officials authorized to make this determination include the HEA, CEA's and Program and Project Managers. These individuals can seek advice from manufacturers, engineers, and other qualified, knowledgeable persons to assist in this process. The HEA can also request a Commodity Jurisdiction (CJ) determination from DTC if doubt about proper jurisdiction persists.

3.2.1 Upon a written CJ request from the HEA, DTC will, in consultation with the Departments of Defense, Commerce, and other concerned U.S. Government agencies, provide a determination of whether a specific item is covered by the USML. 22 CFR § 120.4 states the bases upon which a commodity determination is made, and how jurisdictional disputes may be resolved. All CJ requests must come through Headquarters. Generally, NASA does not submit CJ requests. NASA CEA's may always consult with the HEA if questions of jurisdiction arise.

3.2.2 If an item is believed to be under the jurisdiction of the EAR but the exporter is not able to classify the item on the CCL, a classification request can be submitted to the BIS at the Department of Commerce. All NASA classification requests are submitted by the HEA. A complete description of the item, including its intended purpose and all the capabilities the item may have, is required, as well as a suggested Export Control Classification Number (ECCN). BIS will provide a written classification back to NASA, which may include limitations and requirement for reclassification if the item is modified or improved.

3.2.3 With the exception of "publicly available" technical data/technology or software, virtually all commodities, technical data, and software are subject to the export control regulations. If technology, technical data, or software is "publicly available," the export or transfer may be effected to any party (other than U.N.-embargoed countries) without a license; publicly available technology and software are not subject to export control. Note: Currently, the ITAR states that the performance of defense services or technical assistance relating to any defense article to any foreign party, even when using exclusively publicly available information, is an activity subject to export control. See 22 CFR § 124.1(a).

3.2.4 If the item is not publicly available, it must be classified either under an Export Control Classification Number (ECCN) on the CCL, 15 CFR Part 774, Supp. 1 (see Chapter 4 of this NPG), or under a Category Number on the USML, 22 CFR Part 121 (see Chapter 5 of this NPG). Once properly classified on the CCL or USML, it is relatively easy to determine the applicable IVL, License Exception, or License Exemption requirements for any export.

### 3.3 FOREIGN PARTNER OR END-USER CREDENTIALS

In any export activity, it is imperative to know the intended end-user. The following points are a valuable guide to establish end-user (foreign partner or contractor credentials).

3.3.1 Check to ensure that the recipient is not a Denied Party (15 CFR § 764, Supp. 2, <http://207.96.11.93/DPL/Default.shtm>), a Specially Designated National (15 CFR § 764, Supp. 3, <http://www.treas.gov/offices/enforcement/ofac/sdn/t11sdn.pdf>), a Debarred Party (<http://www.pmdtc.org/debar059.htm>), or an Entity of Concern (15 CFR § 744, Supp. 4, <http://207.96.11.93/Entities/>). Normally, only publicly available information should be provided to a recipient identified on any such list. Ability to provide non-publicly available information is determined by requirements. An IVL, License Exemption, or License Exception may be required. Consultation with HEA or CEA, as appropriate, is needed.

3.3.2 Check for "red flags." Refer to BIS' "Know Your Customer" Guidance and Red Flags in §732 Supp 3. When "red flags" are raised by the information provided, NASA officials have a duty to check out suspicious circumstances and inquire about the end use, end user, or ultimate country of destination. Absent any "red flags" in the information provided, there is no affirmative duty to inquire or otherwise verify the foreign party.

3.3.3 Encourage the maximum flow of information. Do not inhibit the flow of information from potential foreign partners in an effort to prevent the discovery of adverse end use, end user, or country of destination. Such actions will not insulate NASA personnel from liability, and will likely be considered an aggravating factor in enforcement proceedings.

3.3.4 Reevaluate any discoveries after inquiry. Inquiry and reevaluation are intended to determine whether there are explanations or justifications for discovered "red flags." If they can be justified, it is appropriate to proceed with the transfer or export. If they cannot be justified, proceeding with the transfer or export may place NASA personnel at risk of having had "knowledge" of a potential violation of the export control regulations.

3.3.5 Consult with CEA, CEC, HEA, or HEC for guidance. If concerns remain about a particular transfer or export, after inquiry and reevaluation, refrain from the transaction, provide all relevant information to the HEA or CEA, and await their determination.

3.3.6 Everyone needs to know how to handle "red flags." Information about proposed transfer/exports must be shared and evaluated by responsible individuals.

### 3.4 LICENSE REQUIREMENTS

The procedures for determining license requirements are stated in Chapters 4 and 5 of this NPR for exports under EAR and ITAR jurisdictions, respectively. It is possible that certain Exceptions and Exemptions may apply that permit an export without the need of a license; these Exceptions and Exemptions are discussed in sections 4.3.1 through 5.3.1.

### 3.5 TECHNOLOGY TRANSFER CONTROL PLANS

3.5.1 A Technology Transfer Control Plan (TTCP) is a brief document, intended to serve as an aid and a guide to Program and Project Managers, as well as other NASA officials and contractors involved in an international activity. The TTCP responds to four fundamental sets of questions that NASA officials and contractors working with foreign nationals in a NASA program or project should ask:

1. What technologies, software, or hardware am I working with that are subject to export control?
2. What foreign nationals (and what nations) am I working with?
3. What technologies, software, or hardware do I need to provide to those foreign nationals, according to the agreement or contract governing this activity? Which ones do I need to protect?
4. How will I provide those export-controlled technologies, software, or hardware to those foreign nationals with whom I am working? How will I protect export-controlled technologies, software, or hardware from unauthorized transfer?

3.5.2 If a NASA program or project will not export software or hardware and will disclose only publicly available information to all participating foreign entities, a TTCP would not be necessary or appropriate. However, if a NASA activity will export hardware or software, or will transfer or disclose export-controlled technology or software, to a foreign party, then a TTCP is an appropriate and useful tool to ensure that all persons participating in the activity

understand what export-controlled items are involved, what foreign entities are involved, what export-controlled items NASA must provide to those foreign entities under the terms and conditions of the cooperation, and how those items will be transferred to those foreign entities (including the means of transfer and appropriate markings, as required by the governing international agreement or contract).

3.5.3 NASA Program and Project Managers should consult with their CEA's, or the HEA, as appropriate, in the development of TTCP's for their programs that involve foreign participation and exports. A sample TTCP appears in Appendix B of this NPR. NASA Program and Project Managers are also encouraged to consult with their Center Chief Patent Counsel, Software Release Authority and the Innovative Technology Transfer Partnership (ITTP) Program when developing a TTCP.

## 3.6 RECORDKEEPING

3.6.1 The EAR requires that records be maintained for all exports or transfers of items on the CCL for a period of at least five (5) years beyond the expiration date of the license. See 15 CFR § 762.6. Records must also be maintained when using License Exceptions or EAR-99/NLR.

3.6.2 The ITAR likewise requires that records be maintained for all exports or transfers and imports of items on the USML for a period of five (5) years from the expiration of the license. See 22 CFR §§ 122.5 and 125.6. Records must also be maintained when using License Exemptions.

3.6.3 The statute of limitations for criminal actions under the Export Administration Act (EAA) and the Arms Export Control Act (AECA) is five (5) years. Therefore, it is advisable to retain all export control records for not less than five (5) years after the transfer or expiration of the license. BIS, DTC, and the BICE may inspect records at any time.

3.6.4 Records to be retained include the following in original or copy form: shipping documents (e.g., GBL's, and SED's); validated licenses; letters to NASA contractors by Contracting Officers or their representatives authorizing the use of export license Exceptions or Exemptions; classification determinations by NASA, BIS, or DTC; and records other than SEDs regarding the use of export license Exceptions or Exemptions, where appropriate.

## 3.7 REPORTING

3.7.1 When preparing Statements of Work and data deliverable requirements, Program and Project Managers shall ensure that the following requirements are included in solicitations, contracts, and grants:

- Requirement for a plan identifying export licenses required for performance, and exemptions and exceptions that will be used;
- Requirement for a status report of licenses obtained, including copies of licenses;
- Requirement for a status report of exports effected against those licenses, including copies of SEDs and other related shipping documents.

These reports shall be delivered to the Program or Project Manager, as appropriate, and to the CEA of the relevant NASA Center, or the HEA at NASA Headquarters, as appropriate.

## 3.8 ELECTRONIC TRANSMISSION

3.8.1 To the maximum practicable extent, and where feasible, ensure that the confidentiality and integrity of export controlled information exchanged over the internet is properly protected by use of encryption, in accordance with NPR 2810.1.

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## CHAPTER 4. EXPORT ADMINISTRATION REGULATIONS (EAR) PROCEDURES

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### 4.1 GENERAL

4.1.1 In general, all dual-use items in the U.S. or moving in transit through the U.S. are subject to the EAR. An exception to this is those items that are exclusively controlled by other departments or agencies of the U.S. Government (such as the DOS for items subject to the ITAR, 22 CFR Part 121), and such technology or software as are in the public domain. For more information and greater detail about the scope of the EAR, refer to the EAR, 15 CFR Part 734.

4.1.2 Once it is determined that the item or activity is subject to the EAR, it must be classified according to the CCL, contained in Supplement No.1 to Part 774 of the EAR. The general characteristics of the item will determine its appropriate category. When the item has been classified into one of the categories, its particular characteristics and functions can be matched to a specific Export Control Classification Number (ECCN). The CCL contains 10 categories, 0 thru 9; each category is subdivided into five groups designated by letters A through E. The ECCN consists of a set of digits and a letter.

4.1.3 Each ECCN entry identifies the type of, and reason for, control associated with the item, and under what conditions a License Exception may be granted. The first digit identifies the general category, the letter immediately following identifies under which of the five groups the item is listed. The second digit differentiates individual entries by identifying the type of controls associated with the items contained in the entry. The second or third digit serves to differentiate between multilateral and unilateral export controls.

For example, in ECCN 9A004, the "9" represents "Propulsion Systems, Space Vehicles and Related Equipment." The "A" represents "Systems, Equipment and Components," and the 00 represents the reason for control as "National Security." The last digit, "4," represents the sequential location in the category.

If a commodity or technology under the jurisdiction of the EAR is not described under an ECCN on the CCL, it is designated "EAR-99," which describes items subject to the EAR but not specifically listed on the CCL. Generally, EAR-99 items are controlled at the lowest level, and could be exported without an IVL or specific License Exception to any destination except embargoed countries or countries designated by the Secretary of State as sponsors of terrorism. If your item or technology is subject to the scope of the EAR, you should then consider each of the "Ten General Prohibitions" listed in part 736 of the EAR, to ensure that none of those prohibitions applies (e.g., exporting to prohibited end-users on the List of Entities of Proliferation Concern in Supplement 4 to Part 744 of the EAR).

4.1.4 Procedures for determining EAR license or License Exception eligibility are delineated in the following decision tree:

### 4.2 DECISION TREE

4.2.1 Having consulted the CCL and classified the item to be exported under an ECCN, this decision tree will lead to a determination as to whether a license is required to export or reexport the item to specific destination. If applicable, check to see whether a valid export license currently exists for the proposed export, against which the export may be properly effected. 15 CFR § 738.4 gives more detailed guidance, as well as the Country Chart. Note: publicly available technical data and software are generally exportable to all destinations.

4.2.2 Under the entry heading "License Requirements" on the CCL, in each ECCN Description, reasons for control are identified. Also in each ECCN, certain CCL-based License Exceptions may be listed for that entry.

4.2.3 With each Reason for Control, there is an applicable Country Chart identifier noted. It is now necessary to consult the Country Chart, locate the country of destination, and determine whether an "X" is marked in the cell under any of



the associated Reasons for Control. If no "X" appears in the relevant column for the destination country, then No License is Required, and the export may be effected by simply marking "NLR" on the SED, once all appropriate screens (See Section 4.4 of this NPR, *infra*) and red flags (See Section 3.3 of this NPR, *supra*) have been reviewed.

4.2.4 If an "X" appears in the relevant column for the country of destination, a license is required unless a License Exception applies (see License Exceptions, *infra*). The appropriate application form for exports and transfers is BIS Form 748P. In some cases, if the export is not covered by an international agreement or contract with non-transfer/nondisclosure provisions, a Statement by the Ultimate Consignee, BIS Form 711, may be required, as enumerated in 15 CFR Part 748.11. Refer all license requirements to the HEA with other relevant license application information.

## 4.3 LICENSE EXCEPTIONS

4.3.1 A "License Exception" is an authorization that allows the export or re-export, under stated conditions, without an IVL. 15 CFR Part 740 describes all EAR License Exceptions and provides detailed instructions for Exceptions and their restrictions. There are currently 17 EAR License Exceptions, 10 of which are discussed in Section 4.3.5 below, as they are the License Exceptions most commonly used by NASA.

4.3.2 Note: License Exceptions may not be used where the export is prohibited by a Denial Order; where the export would support proliferation activities; where the export would violate terms and conditions of an IVL or License Exception; or where the exporter has knowledge that a violation of law will occur in the export. Additionally, consistent with the policies and provisions of Section 6(l) of the EAA, 50 U.S.C. app. § 2405(l), no License Exceptions may be used to export items controlled for Missile Technology (MT) reasons on the CCL.

4.3.3 Because most EAR License Exceptions require a written assurance by the recipient (*e.g.*, BIS Form 711, Statement by Ultimate Consignee), an International Agreement or contract is normally required for use of any License Exception.

4.3.4 Although License Exceptions permit the export of items without an IVL, there are requirements for filing SED's. Record the correct License Exception symbol (*e.g.*, LVS, GBS, TMP) and the correct ECCN (*e.g.*, 4A003, 5A002) on the SED for all shipments of items exported under a License Exception. Use of a License Exception requires approval of the CEA or HEA.

4.3.5 The following list represents the recommended sequence for reviewing some of the EAR License Exceptions most commonly used by NASA to determine whether an Exception may be used to effect an export. As soon as the exporter identifies an Exception which applies to her or his export, and for which all of the conditions of the Exception are met, and no General Prohibitions apply, there is no need to attempt to find another applicable Exception. When considering a License Exception, you must read the entire description in the EAR, 15 CFR § 740. The list proceeds from least restrictive to most restrictive:

1. **NLR**: "No License Required"; applicable to **commodities, software, and technology** (15 CFR § 738.4; see also Section 4.2.3 of this NPR, *supra*).
2. **GOV**: Exports consigned to and for the official use of the U.S. Government or any agency of a "cooperating government"; applicable to **commodities, software, and technology** (15 CFR § 740.11).
3. **GBS**: Exports of **commodities controlled for National Security only** to Country Group "B" (Free World); requires "GBS-Yes" under ECCN on CCL (15 CFR § 740.4).
4. **RPL**: One-for-one replacement parts for previously exported equipment; applicable to **commodities and software only** (15 CFR § 740.10).
5. **LVS**: single shipment exports of eligible **commodities** as identified by "LVS - \$(value limit)" on the CCL to destinations in Country Group B; *provided*, the net value of the items included in the same order and controlled under the same ECCN entry on the CCL does not exceed the amount specified for LVS in that entry (15 CFR § 740.3)
6. **CIV**: Exports to former Communist Bloc countries of **commodities, software, and technology controlled for national security reasons only** and identified by "CIV - Yes" on the CCL; *provided*, the items are destined to civil end-users for civil end-uses (15 CFR § 740.5).
7. **CTP**: Exports of certain **computers and components** for consumption in Computer Tier countries (15 CFR § 740.7).
8. **TSU**: Exports of "operation **technology and software**"; software updates ("bug fixes"); "mass market" software; and



publicly available encryption source code. "Operation technology" is the minimum technology necessary for the installation, operation, maintenance, and repair of items lawfully exported. If the operation technology takes the form of software code, it must be object code, not source code (15 CFR § 740.13).

9. **TSR:** Exports of **technology and software controlled for national security reasons only** and identified by "TSR - Yes" in entries on the CCL; *provided*, the software or technology is destined to Country Group "B" ("Free World") (15 CFR § 740.6).

10. **TMP:** Temporary exports of **commodities and software** that are tools of trade; kits and replacement parts; exhibitions; inspections and calibrations; or Beta-test software. The **commodities and software** must be exported for less than 1 year, and must remain under the effective control of the exporter (15 CFR § 740.9).

11. **ENC:** Exports and reexports of encryption items controlled under specific ECCNs, to specific countries. There are review and reporting requirements that apply to certain exports using ENC (15 CFR § 740.17).

## 4.4 SCREENS

4.4.1 Foreign partners and end-users of NASA exports must be screened for nuclear proliferation concerns, missile proliferation concerns, and chemical-biological proliferation concerns. Refer to 15 CFR Part 740 for missile and nuclear screens and 15 CFR Part 742.2 for destinations of chemical-biological weapons proliferation concern.

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## CHAPTER 5. INTERNATIONAL TRAFFIC IN ARMS REGULATIONS (ITAR) PROCEDURES

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### 5.1 GENERAL

5.1.1 In general, articles and services deemed to be defense articles and defense services, and so designated by the USML, are subject to the ITAR. Launch vehicles and satellites are on the USML. Designations of defense articles are made by the DOS, with the concurrence of the DOD. For more information refer to 22 CFR Parts 120 and 121 in the ITAR.

5.1.2 The USML, 22 CFR Part 121, contains 21 generally described categories of controlled commodities, technical data, and services subject to the ITAR. Two categories particularly relevant to NASA activities are: Category IV-Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs and Mines; and Category XV-Space Systems and Associated Equipment.

#### 5.1.3 Imports.

Notably, unlike the EAR, the ITAR contains provisions governing certain imports of defense articles, including IVL requirements and License Exemptions. In most cases, temporary imports of USML-listed defense articles by NASA are eligible for ITAR License Exemptions. Permanent imports by NASA of USML-listed defense articles are regulated by the Department of the Treasury, Bureau of Alcohol, Tobacco, and Firearms; such permanent imports do not require a license. See 27 CFR § 47.53.

5.1.4 Any person who intends to export or to import temporarily a defense article must obtain the approval of the Office of Defense Trade Controls (DTC) prior to the export or temporary import, unless the activity qualifies for an Exemption (see Section 5.3 of this NPR, *infra*). Procedures for determining ITAR license requirements and License Exemption eligibility are delineated in the following decision tree:

### 5.2 DECISION TREE

5.2.1 To determine item License Exemption eligibility under the ITAR, first classify the item on the USML and review the Exemptions listed below. If any Exemption applies, a license is not required, but the exporter may have to file a Shipper's Export Declaration (SED) and other documents, in accordance with 22 CFR §§ 123.22(c), 123.22(d), 123.26, 125.6, or 126.4(d).

5.2.2 ITAR License Exemptions may not be used to effect exports of any items to Proscribed Countries or nationals of Proscribed Countries, as generally identified in 22 CFR § 126.1. Prohibitions may be due to United Nations Security Council embargoes, Secretary of State determinations that certain countries have repeatedly provided support for acts of international terrorism, or whenever an export would not otherwise be in furtherance of world peace and the security and foreign policy of the United States. Comprehensive arms embargoes are normally published by the State Department in the Federal Register (see also <http://www.pmdtc.org/country.htm>).

5.2.3 If an Exemption is not available for a proposed export, an ITAR export license must be obtained. The following forms are appropriate for items on the USML:

- for temporary exports and transfers of unclassified items, use Form DSP-73;
- for permanent exports and transfers of unclassified items, use Form DSP-5;
- for exports and transfers of all classified items, use Form DSP-85; and
- for temporary imports of unclassified items, use Form DSP-61.

5.2.4 All ITAR license requests and other relevant license application information must be sent to the HEA at NASA Headquarters for submission of licenses.

## 5.3 LICENSE EXEMPTIONS

Numerous special conditions may exist that might permit the use of an ITAR License Exemption. Exemptions may apply due to the nature of the defense article or defense service, the destination, or the status of the exporting entity (*i.e.*, U.S. Government agencies enjoy more permissive treatment under the ITAR than private companies). The details for Exemptions are found in the ITAR at 22 CFR Parts 123, 124, 125, and 126. Generally, any use of an ITAR License Exemption requires an International Agreement or contract, as well as coordination with the CEA or HEA.

5.3.1 Following is a summary of ITAR License Exemptions that are especially relevant to NASA activities:

1. **22 CFR §125.4(b)(13): Publicly Available Information About Defense Articles.** Exports of **publicly available information** about defense articles. This Exemption is applicable to information approved by NASA for public release in any form, usually through the procedures of NPR 2200, "Guidelines for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information." It does not require that the information be published in order to qualify for the Exemption.

2. **22 CFR §125.4(b)(7): Technical Data Returned to Sender.** Exports of **technical data** being returned to the original source of import.

3. **22 CFR §126.4(a): Exports by or for U.S. Government Agency.** Temporary **import** or temporary **export** of **any defense article, including technical data or the performance of a defense service**, by or for NASA: (1) for NASA's official use; or (2) for carrying out a NASA cooperative program. Exemption applies only when all aspects of a transaction (export, carriage, and delivery abroad) are effected by a U.S. Government agency or when the export is covered by a GBL. DTC approval must be obtained before defense articles previously exported pursuant to this Exemption are permanently transferred, unless the defense articles have been rendered useless for military purposes beyond the possibility of restoration. **Note:** For purposes of this Exemption, defense articles exported for incorporation into a foreign launch vehicle or for use on a foreign launch vehicle or satellite that is to be launched from a foreign country are permanent exports.

4. **22 CFR §126.4(c): Imports and Exports for Use by USG Agency Abroad.** **Export** or **temporary import** of **defense articles, including technical data and performance of a defense service**, for end-use by a USG agency in a foreign country, if: (1) Export or temporary import is pursuant to a contract with NASA or NASA-written direction; and (2) End-user in the foreign country is a USG agency or facility, and the defense articles or technical data will not be transferred to any Foreign Person; and (3) The urgency of the USG requirement is such that the appropriate export license or GBL could not have been obtained in a timely manner.

5. **22 CFR §125.4(b)(5): Operation Technical Data Exports for Lawfully Exported Articles.** Exports of **technical data** in the form of basic operations, maintenance, and training information relating to a defense article lawfully exported or authorized for export to the same recipient.

6. **22 CFR §125.4(b)(3): Technical Data Exports Directed by NASA.** Exports of **technical data** in furtherance of a contract between the exporter and NASA, where the contract provides for the export of the data and the data does not disclose the details of design, development, production, or manufacture of any defense article. The contract clause concerning use of this License Exemption is found at NFS 1852.225-70, alternate 1.

7. **22 CFR §125.5(c): Plant Visits.** Disclosures to Foreign Persons of unclassified **technical data** during the course of a plant visit approved by NASA; *provided*, the technical data does not contain information in excess of that approved for disclosure, and does not include information required for design, development, production, or manufacture of a defense article.

8. **22 CFR §123.16(b): Exports of Parts, Components, and Models.** Exports of **parts and components** when the total value does not exceed \$500 and parts are exported to support a defense article previously authorized for export, to a previously approved end-user, and not to be used to enhance the capability of the defense article. Also permits export of unclassified **models or mock-ups** of defense articles; *provided*, they are inoperable, do not reveal any detailed design, development, production, or manufacturing technical data, and do not contain USML-listed components.

9. **22 CFR §126.5: Canadian Exemption.** Most **temporary imports** from (and subsequent reexports to) Canada of **defense articles** are eligible for this Exemption. Certain limited **exports** of **defense articles and defense services** to Canada and Canadian nationals are also permitted, subject to specific agreement and reporting requirements.

10. **22 CFR §123.4(a) and (b): Temporary Imports.** Temporary **import** for up to 4 years (and subsequent reexport to sending country) of unclassified **U.S.-origin defense items (and items manufactured abroad with U. S.**

**Government approval)** for items serviced, inspected, tested, calibrated, repaired, or imported for the purpose of exhibition in the U.S.

**11. 22 CFR §125.4(b)(11): Technical Data Authorized by Written DTC Waiver.** Exports of **technical data** for which the exporter, pursuant to an agreement with NASA which requires such exports, has been granted an Exemption in writing by DTC. This Exemption will normally be granted only if the arrangement directly implements an international agreement to which the United States is a party and if multiple exports are contemplated.

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## CHAPTER 6. NASA EXPORT CONTROL PROGRAM EDUCATION AND TRAINING

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### 6.1 GENERAL

It is incumbent on the HEA and each CEA to maintain a working knowledge of current EAR and ITAR provisions and restrictions applicable to NASA programs. This includes:

6.1.1 Receiving and reviewing appropriate publications, including the EAR, the ITAR, and the Federal Register for revisions to the EAR and ITAR; and

6.1.2 Attending at least one export control training seminar annually.

### 6.2 TRAINING PROGRAM

The HEA and HEC will establish and conduct a training program for CEA's and Export Counsel.

6.2.1 At least annually, the HEA will conduct or arrange training for concerned NASA officials, including CEA's, CEC's, Program and Project Managers, Transportation Officers, and others, on issues and developments in export controls that affect NASA's international activities.

6.2.2 The HEA and each CEA will additionally manage and provide export control training consistent with their responsibilities as enumerated in Sections 2.2.1.6 and 2.3.2.10, respectively.

6.2.3 The HEA will consult periodically among CEA's, HEC, CEC's, Program and Project Managers, and other concerned NASA officials to determine where the NASA Export Control Program may be improved and whether additional comprehensive training is warranted.

6.2.4 The HEA will maintain an on-line Export Control awareness-training module on the NASA Site for On-Learning and Resources.

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# CHAPTER 7. NASA EXPORT CONTROL PROGRAM AUDITING

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## 7.1 PURPOSE

The purpose of the NASA Export Control Program Annual Audit is to ensure adequacy of the overall NASA Export Control Program, and verify, via sampling, that required screening and licensing procedures are regularly followed and that required documents are maintained in compliance with the requirements of the EAR and the ITAR. This includes a review to ensure that appropriate records of all exports or transfers effected in support of NASA cooperative international programs are maintained in accordance with relevant regulations and NASA policies.

## 7.2 AUDITOR SELECTION

In accordance with NPD 2190.1, each Center Director will designate a qualified individual as an Export Control Auditor (ECA) to annually review the operation of the NASA Export Control Program at that Center during the previous calendar year. The individual selected by the Center Director to serve as the Center ECA to perform the Annual Audit should have received audit training and have previous auditing or inspection experience. At a minimum, the appointed auditors should have participated in an ISO 9000 internal auditor course or other comparable auditor training. Individuals without appropriate training should not be selected, except in exceptional circumstances. The HEA will transmit audit guidance to each ECA in early January of each year; therefore, Center Directors should make ECA appointments, and inform the HEA of such appointments, as early in January of each year as practicable.

## 7.3 AUDITOR DUTIES AND RESPONSIBILITIES

Each Export Control Auditor (ECA) shall:

- Understand the tasks required in performing the audit (e.g., conducting interviews, random sampling of international projects conducted at the NASA Center, reviewing policy, reviewing export and shipping documents, developing recommendations, and preparing the final report).
- Have access to and a basic knowledge of the ITAR, EAR, and NASA Export Control Program.
- Be independent, motivated, and interested in performing the Export Control Auditor function.
- Be available to complete the task in the time allotted.
- Have complete access to the data and parties involved.
- Audit the Center export control function, including all export control activities and major programs that engage in exports.
- Determine if support contractors effecting NASA IVL's, or exporting at NASA direction, comply with the relevant regulations and recordkeeping requirements.
- Use the Audit Module developed each year by the HEA as a tool in conducting the audit, and
- Review export-related files;
- Examine Center documents for effecting exports under NASA obtained export licenses; and
- Examine a sampling of the documentation (e.g., SED's, and invoices) for other exports, paying particular attention to the items exported and the stated authority for the export.



- Prepare an audit report to the Center Director and CEA that includes a description of the review process undertaken, the findings, and any recommendations or suggestions for improvement. The ECA's audit report should be provided by February 20 of each year.
- Maintain documentation supporting the audit performed.

## **7.4 FINAL REPORT**

The CEA will review the ECA's report and provide a written response, including concurrence, partial concurrence, or nonconcurrence with any findings and recommendations. The CEA will forward the final report, together with comments, recommendations, and actions taken or pending to the HEA by March 31 of each year.

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## CHAPTER 8. QUESTIONS OF COMPLIANCE AND VIOLATIONS

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### 8.1 GENERAL

NASA must be a responsible exporter. Noncompliance with U.S. export control laws and regulations and NASA's Export Control Program could result in schedule and cost overruns, criminal, civil, or administrative penalties against both Government officials and private contractors, and harm to the national security or foreign policy of the United States. It is every employee's responsibility to be aware of the export control laws and regulations, and whenever in doubt to seek assistance when effecting transfers to foreign parties.

### 8.2 VOLUNTARY DISCLOSURE

8.2.1 Both the Export Administration Regulations and the International Traffic in Arms Regulations require voluntary self-disclosure if an exporter finds errors or non-compliance in export activities, even if errors were inadvertent. The voluntary disclosure of all the facts and circumstances will serve as a mitigating factor in determining what administrative sanctions or penalties will be sought. For voluntary disclosures to be considered a mitigating factor, they must be received by the Office of Defense Trade Controls (for ITAR violations), or the Office of Export Enforcement (for EAR violations), prior to the U.S. Government receiving similar information from another source and commencing an investigation or inquiry that involves that information. Refer to 22 CFR § 127.12 and 15 CFR § 764.5 for specific guidance on voluntary disclosure processes at DTC and BIS.

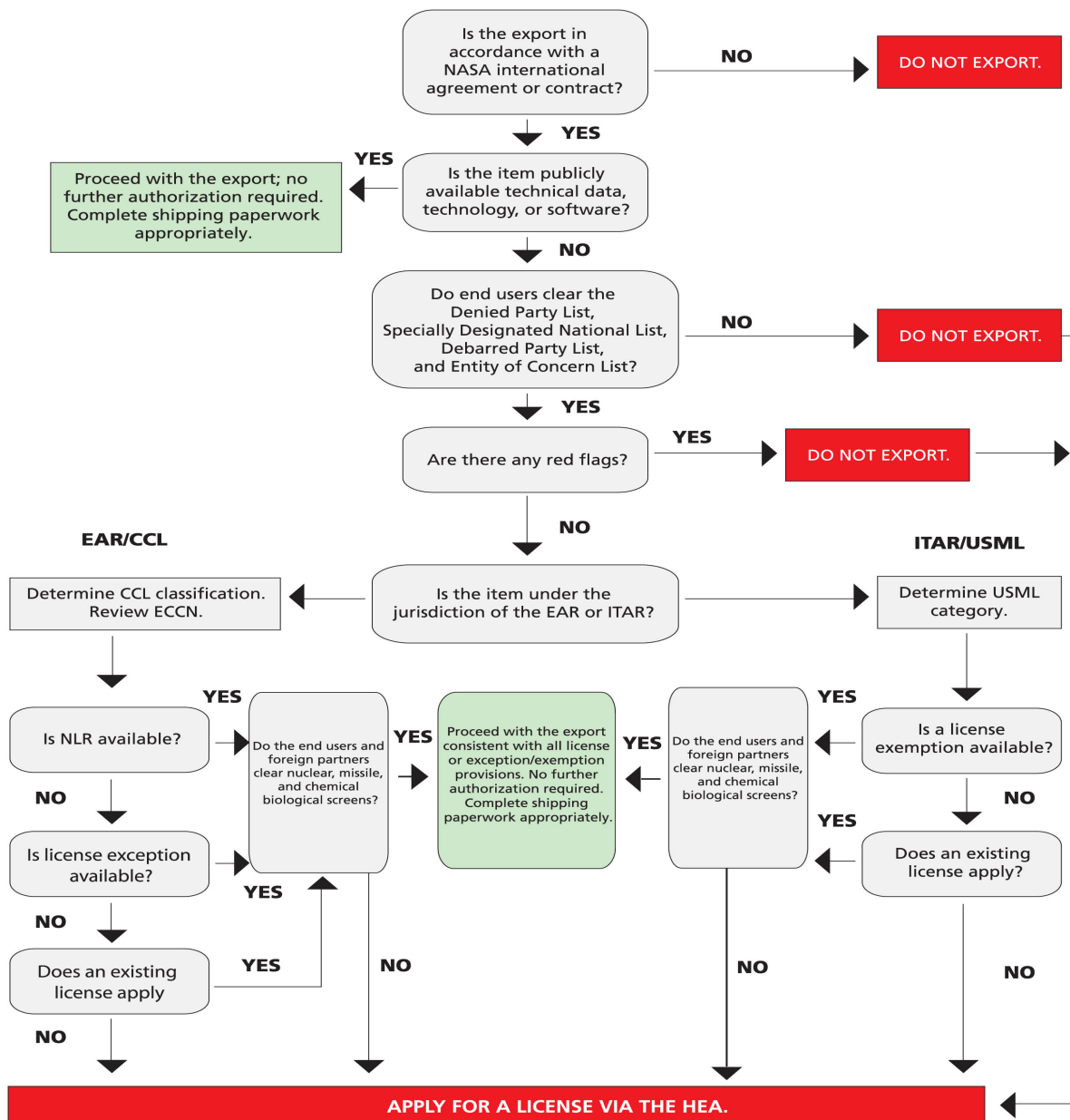
8.2.2 Any NASA employee or NASA contractor concerned about questions of export compliance or impropriety in the area of export control should report those concerns to the CEA or CEC at the Center, or to the HEA or HEC at NASA Headquarters, in a timely manner. The appropriate CEA and HEA will immediately gather all the pertinent information, make an initial determination as to whether the subject activity should be suspended, review the facts, and determine if a voluntary disclosure is warranted. All NASA Voluntary Disclosures will be submitted to the appropriate U.S. Government regulatory and enforcement agencies through the HEA at NASA Headquarter's Office of External Relations.

8.2.3 Errors in effecting exports or making transfers should not be concealed for any reason. It is more effective to uncover errors or mistakes, investigate, and understand the causes, and then make process changes to preclude future reoccurrence.

### 8.3 VIOLATIONS

8.3.1 22 CFR § 120.27 of the ITAR lists U.S. criminal statutes that address violations of the ITAR. 15 CFR § 764.3 of the EAR provides information on civil and criminal penalties for violations of the EAR. All suspected criminal violations in the NASA Export Control Program are to be reported immediately to the HEA, who will consult with the Office of the Inspector General and appropriate regulatory and enforcement agencies.

## APPENDIX A. Export Processing Template (EPT)



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## APPENDIX B. Technology Transfer Control Plan (TTCP)

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**Name of Project:**Extreme X-ray Probe of Radiation Traits (EXPORT)

**Implementing Contractor(s):**

Caltech/JPL

**Export-Controlled Items (i.e., Technologies, Software, or Hardware) Involved in Project:**

1. Space-qualified cryocoolers, USML Category XV(e)
2. Blueprints and Operator's manual for space-qualified cryocoolers, USML Category XV(f)
3. Software source code and object code for operation of space-qualified cryocoolers, USML Category XV(f)
4. Laser diagnostic equipment, CCL ECCN 6A005
5. Blueprints and Operator's Manual for laser diagnostic equipment, CCL ECCN 6E001 and 6E201

**Foreign National Participants in Project:**

1. Andreas Wilk (ESA, Germany)
2. Jean-Max Gross (CNES, France)
3. Diana Marx (ASI, Italy)

**Export-Controlled Items Which NASA is Required to Provide to Above-Listed Foreign Nationals per Governing Agreement or Contract:**

Name of Agreement:NASA-ESA EXPORT MOU, signed February 29, 2000

1. Permanent export; will be integrated onto ESA's EXPORT spacecraft
2. Operator's manual for space-qualified cryocoolers, USML Category XV(f) - *Temporary export*
3. Software object code for operation of space-qualified cryocoolers, USML Category XV(f) - *Permanent export*
4. Laser diagnostic equipment, CCL ECCN 6A005 - *Temporary export*
5. Operator's Manual for laser diagnostic equipment, CCL ECCN 6E201 - *Temporary export*

**Means of Export or Transfer:**

1. NASA will need to obtain an export license from the Department of State for the export of the cryocoolers to ESA's offices in Noordwijk, the Netherlands. IVL application should be made no later than September 1, 2003; export required by April 1, 2004; launch October 31, 2004.

2. NASA will direct JPL, via Task Order, to export the cryocooler operator's manual to the Netherlands, under ITAR Exemption 125.4(b)(3); the manual must be marked as export-controlled, with notice against retransfer, as required by the MOU.
3. Likewise, NASA will direct JPL, via Task Order, to export the operation code for the cryocooler to the Netherlands, under ITAR Exemption 125.4(b)(3); the code must also be marked as export-controlled, with notice against retransfer, as required by the MOU.
4. Neither NASA nor JPL requires an IVL to export the laser diagnostic equipment to the Netherlands; the equipment will be exported under "NLR," but must be identified in air waybills and other shipping documents as export-controlled, with notice against retransfer, as required by the MOU.
5. Neither NASA nor JPL requires an IVL to export the operator's manual for the laser diagnostic equipment to the Netherlands; the manual will be exported under "NLR," but must be marked as export-controlled, with notice against retransfer, as required by the MOU.

## **Approved:**

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Project Manager or Designee

## **Reviewed:**

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Center Export Administrator or Designee